

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for determining a location of a mobile station, comprising:

receiving at the mobile station a plurality of simulcast signals having substantially identical information from a plurality of base stations;

determining relative time of arrival information for the ~~received~~ plurality of simulcast signals that is received;

determining a position of the mobile station by the mobile station using an average of a channel impulse response obtained from an estimate of a channel frequency response; and

transmitting the ~~mobile station~~ position from the mobile station to one ~~or more~~ of the plurality of base stations.

2. (Currently Amended) The method according to claim 1, further including determining the relative time of arrival information using characteristics inherent in the ~~received~~ plurality of simulcast signals that is received.

3. (Currently Amended) The method according to claim 2, wherein the inherent characteristics of the ~~received~~ plurality of simulcast signals that is received include a time dispersion due to a simultaneous transmission of the substantially identical simulcast signals.

4. (Currently Amended) The method according to claim 3, wherein the ~~received~~ plurality of simulcast signals having an orthogonal frequency division multiplexing modulation format.

5. (Canceled)

6. (Previously Presented) The method according to claim 1, further including transforming the channel frequency response to obtain the relative time of arrival information.
7. (Previously Presented) The method according to claim 1, further including receiving base station identification information in the respective simulcast signals.
8. (Previously Presented) The method according to claim 1, further receiving global positioning satellite signals for determining the relative time of arrival information.
9. (Currently Amended) The method according to claim 1, further including utilizing doppler shift information associated with a movement of the mobile station to determine the position of the mobile station.
10. (Original) The method according to claim 1, further including computing a locus of points having a distance from first and second ones of the plurality of base stations that differs by a signal time of arrival difference for signals from the first and second ones of the plurality of base stations.
11. (Currently Amended) The method according to claim 10, further including further loci of points for further pairs of the plurality of base stations.
12. (Original) The method according to claim 1, further including computing the relative time of arrival information using differential in frequency information.
13. (Previously Presented) The method according to claim 1, further including receiving a signal from a first one of the plurality of base stations to a second one of the plurality of base stations for identifying the simulcast signals from respective first or second ones of the plurality of base stations.

14. (Canceled)

15. (Currently Amended) The method according to claim 1, further including transmitting the ~~mobile station~~ position from the one of the ~~or more~~ plurality of base stations to a network server associated with the one of the ~~or more~~ plurality of base stations.

16. (Currently Amended) The method according to claim 1, further including broadcasting information associated with the ~~mobile station~~ position.

17. (Original) The method according to claim 15, further including broadcasting location-specific advertisements.

18. (Previously Presented) A method for receiving location information for a mobile station at a base station, comprising:

transmitting simulcast signals having substantially identical information to the mobile station; and

receiving, at the base station, mobile station location information from the mobile station determined from relative time of arrival information for the simulcast signals, wherein the mobile station location information is determined by the mobile station using an average of a channel impulse response obtained from an estimate of a channel frequency response.

19. (Previously Presented) The method according to claim 18, wherein the simulcast signals comprise orthogonal frequency division multiplexing signals.

20. (Original) The method according to claim 19, further including transmitting location-specific information to the mobile station.

21. (Currently Amended) A mobile station, comprising:

a receiver for receiving simulcast signals having substantially identical information from a plurality of base stations;

a processor for determining time of arrival information for the received simulcast signals that are received and identifying a location of the mobile station using an average of a channel impulse response obtained from an estimate of a channel frequency response; and

a transmitter for transmitting the ~~mobile station~~ location to one or more of the plurality of base stations.

22. (Previously Presented) The mobile station according to claim 21, wherein the simulcast signals are orthogonal frequency division multiplexing signals.

23. (Canceled)

24. (Currently Amended) A wireless network for providing location specific information ~~to a mobile station~~, comprising:

a mobile station for receiving simulcast signals and determining a location of the mobile station using an average of a channel impulse response obtained from an estimate of a channel frequency response; and

a plurality of base stations for transmitting the simulcast signals having substantially identical information and receiving the location of the mobile station transmitted from the mobile station.

25. (Currently Amended) The wireless network according to claim 24, wherein the simulcast signals are orthogonal frequency division multiplexing signals.

26. (Currently Amended) The wireless network according to claim 24, further including at least one network server for providing location-specific information to the mobile

station based upon mobile station location information provided to one or more of the plurality of base stations.

27. (Previously Presented) A wireless network, comprising:

a plurality of base stations for transmitting simulcast signals having substantially identical information to mobile stations and receiving mobile station location information derived by the mobile stations using an average of a channel impulse response obtained from an estimate of a channel frequency response to broadcast location specific information to the mobile stations.